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ABSTRACT

This study investigated changes in student curriculum choice at Seminole Junior College (Florida) A code system was developed for 72 curriculum choices (23 in terminal degree areas), grouped into 19 broad clusters. A computerized Student Flow Matrix was then constructed to display the first and second term curriculum choices of 1,391 students who had a valid curriculum code for both the fall and spring 1973-74 semesters. Three hundred sixty-five (26 percent) of these changed their curriculum code to the extent that they appeared in a new curriculum cluster. More students changed their classification to General Degree (Transfer) than to any other curriculum. The 108 students making this change accounted for 30 percent of the changes overall. However, 82 students (22 percent) left General Degree (Transfer) for other curricula, the largest number of transfers out. On the whole, this pattern of transfer in and transfer out was duplicated in Business (14 percent in and 12 percent out), Education (9 percent in and 9 percent out), and Social Sciences (8 percent in and 8 percent out). Only one other move accounted for more than 5 percent of those changing; 6 percent left Health for other curricula. As would be expected, the areas of Business, General Degree (Transfer), and Education contained the largest number of students. (Author/NHM)

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STUDENT CURRICULUM

CHOICE AND CHANGE

By

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Systems Officer

Seminole Junior College

Student selection of majors in the Community College has been the subject of much debate. It has been argued that the philosophy of general education should be away from specialization, and that students should be allowed, even encouraged, to use the first two years to explore new areas of knowledge. The establishment of requirements in the broad areas of learning as a basis for an Associates Degree are witnessess to this philosophy. The use of these first two years as a time to aid the student in making a realistic appraisal of his strengths and weaknesses, has many supporters. Supplemented by a good guidance program, this critical self examination can lead to a choice of careers that provides a maximum opportunity for success and satisfaction on the job.

However, other forces are now working to counter this generalized approach to education. The reduction of the number of hours in the general educational requirements is an example of this trend. At Seminole, these requirements have gone from 43 hours in 1966-67, when the college opened, to 34 in 1973-74, a reduction of 21%. Even with this reduction many students must amass more than 64 hours at the community college if they are to enter the upper division of a university on a par with native university students.

A section of the 1973-74 college catalog lists fifteen suggested pre-professional programs. The minimum number of hours in these programs is sixty-five and they run as high as seventy-four. Although these programs are not requirements, they do reflect the present upper division entry needs of the transfer students.

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The concept of credit by examination implies that working knowledge of the elements of a field is sufficient. Credit by examination eliminates the teacher, with his insights and enthusiasm, from the process of student self-analysis and exploration. The time shortened degree and the student concern with the occupational aspects of his education tend to further the move from generalization.

The systems requirements established on the state and national level tend to support early specialization. Many of these systems require classification of the student by his intent of the moment. The Placement and Follow-Up evaluation mandated by the Division of Community Colleges, makes programs out of student intent and measures the productivity and effectiveness of the college output from these programs. Headcount enrollments are now on curricular basis. Many models used in the simulation of college activities have as their base student information clustered by major or curriculum choice.

Confronted with this dichotomy of philosophy and action, the college must examine the validity and stability of the student's choice of curriculum. There appear to be two major factors which need analysis. First: what is the extent of the student change in curriculum choice? Second: what is the net effect of these changes on the total college curriculum distribution pattern? This paper addresses itself to a study of these two questions as they relate to Seminole Junior College.

Seminole has always had a curriculum choice item in the student information file. As is unfortunately true of too many items in too many files, this item was not used to any real degree for some time. Two factors brought the item into visibility and use. The Systems Office saw the need to bring some validity to the item if it were to meet needs in systems and model work. The college was also moving into a system of faculty guidance that needed a method of matching the student with a faculty member knowledgeable in that student's intended field of advanced study.

After a period of adjustment, the two needs merged in a set of curriculum categories for student intent that totals 72 choices. Twenty-three of these choices are in the terminal degree area.

Additional time was needed to purge the files of codes obtained under the original system or the transit systems and replace them with the updated codes. The emphasis given

by the faculty advisement system has produced in 1973-74 data which has allowed a reasonable study of the problem.

The 72 curriculum choices were grouped into 19 broad clusters, (Appendix A). Data processing developed a program which first placed students into the proper cluster according to their Term I choice. A Matrix (Appendix B) was developed which then displayed the second term choice. As an example, if a student had chosen Business as his curriculum choice in Term I he would be counted in the column headed "PRVS TERM", and the row headed Bus. If that student changed his curriculum choice to General Degree (Transfer) in Term II he would then be counted in the column headed Gen D Trans and the row beginning with Bus. A diagonal drawn from the number in column Agr, row Agr, to the number in column Fulfill and row Fulfill would show students who have not changed major. Numbers not on this diagonal indicate changes in major. A second Matrix (Appendix C) has been constructed to display Term I to Term II movement as percentages. This Matrix takes the Term I choice as 100% and displays the Term II choice as a percent of the number of students in that curricular choice in Term I. Here the major diagonal would show the percent of students in a field who did not make a change. All percents have been rounded and no effort has been made to sum to 100%.

There were 1691 students that appeared in the files in both Term I and Term II. However, three hundred students (18%) did not have a valid code in one or both of the terms. Future studies should contain a greater percentage of students with a valid curriculum code. Marked improvement can be noted between Term I and Term II. In Term I, 276 students had an invalid code, whereas in Term II only 89 codes were invalid. Because Term I will have a large influx of new students with the accompanying greater chance for error, there is an expected higher rate of invalid codes. In the future this rate should be below that of Term I of 1973-74. Pre-registration and the greater emphasis on the item have produced constant improvement in the validity.

A total of 1391 students had a valid curriculum code for both Term I and Term II. Three hundred sixty-five students changed their curriculum code to the extent that they appeared in a new curriculum cluster. Thus, 26% of the students could be considered as having made a major change in their educational plans.

An examination of the Matrix provides insight into changes made by students. New curricular plans and the programs the students left form an interesting counter flow.

More students changed their plans to General Degree (Transfer) than to any other curriculum. One hundred and eight students made the change to this curriculum. This accounted for 30% of those who changed. However, eighty-two students (22%) left General Degree (Transfer) for other curriculums, again the largest number.

The in-out flow continues through Business (52 students or 14% in and 47 students or 13% out), Education (34 students or 9% in and 32 students or 9% out), and Social Sciences (31 students or 8% in and 31 students or 8% out). Only one other move accounted for more than 5% of those changing. Twenty-one students (6%) left Health for other curriculum.

Another interesting in-out flow occurs in the changes between College Parallel (A.A. Degree) and Terminal (A.S. Degree) programs. Thirty-six students left College Parallel for Terminal Programs and 39 left Terminal Programs for College Parallel. Some of the activity could be the result of confusion as to the exact meaning of the curriculum choice. The eight students who left Law for the Technical Field could well have mistaken the profession of Law with Law Enforcement. The rest of the interaction indicates the students desire to remain in field but change his goal within the field. Eleven students left College Parallel Business but chose the Distributive and Office Fields which are the allied fields in Terminal Programs. Eighteen students moved from Terminal Program of Office and Distributive to College Parallel Business. The major part of the remaining flow is an in-out flow in General Degree (Transfer).

As would be expected in Community Colleges, the areas of Business, General Degree (Transfer) and Education contained the largest number of students. Business accounted for 20% of the students in Term I and 21% in Term II, General Degree (Transfer) 14% in Term I and 16% in Term II, Education 9% in Term I and Term II and Social Sciences 8% in Term I and Term II, other areas which accounted for at least 5% of the students were Fine Arts (7% Term I and Term II), Vocational Technical (8% Term I and 9% Term II) and Biological and Physical Sciences (5% Term I and Term II). However, these areas did not show great change. Technical lost 9 students and gained 18, Fine Arts lost 14 and gained 20, and Biological and Physical Science

lost 19 and gained 16.

A comparison of enrollments in curriculum categories in Term I and Term II displays a marked stability. As would be expected the greatest change in total numbers occurred in General Degree (Transfer) but this change was small, 26 students. These 26 students represent 2% of the total students and a gain of 13% in the area from Term I to Term II. Some curriculums displayed a great deal of activity but there was little or no net change. Business showed a net change of five students or a gain of 2% between terms. Education had a net change of 2 students or 2%. Social Sciences showed no net change in number of students.

An examination of a set of Induced Course Load Matrices has shown that although students may change their majors throughout their college experience, they perform in a predictable manner for each major they choose. Inasmuch as the net changes in curriculum choices are small, previous patterns of course offerings, staffing and support services at this time need consider only the total net growth of the college.

The Student Flow Matrix is a convenient tool to use in the examination of changes in general student carrier choices. The Matrix has the advantage of pinpointing new fields of popularity as well as fields which are losing their popularity as did engineering a few years ago. Not only does the Matrix pick up these shifts but it provides information on which other programs are affected and how they are affected.

The 26% of the students making a curricular change set patterns which could have important implications to career guidance. The major flow goes from specialized fields to general degree and from general degree to specialized fields. This pattern suggests that a major thrust of Term I career guidance should be directed toward people in the general degree classification to assist them in making the best move to specialization. Term II guidance should again center on general degree students. This time, however, the effort could be towards re-assessment of career choice and re-examination of personal value systems because many of the students have made the change due to their inability to perform in the first field.

This Matrix seems to indicate the Community College is indeed providing an opportunity for student self-evaluation

and adjustment. When the twenty-six percent change is viewed as a part of the process of student growth and improved understanding of his personal strengths and weaknesses, the rate does not seem too excessive. Many students choose the Community College because of their questionable academic preparation and lack of definitive life goals. Rather than discount the validity of the curriculum choices and be distressed that these choices undergo change, the colleges should study the patterns of the changes and use the changes to further their services to the student.

CURRICULUM CATEGORIES

STATE PPBS		SEMINOLE CURRICULUM	
Number	Name	Number	Name
1.01	Agriculture	01	Agriculture
1.02	Biological & Physical Science	02	Bio. Sciences
		06	Earth Sciences
		07	Other Natural Science
		10	Chemistry
		11	Physics
		16	Other Physical Science
1.03	Business	36	Business Administration
		38	Accounting
		39	Other Business
1.04	Education	24	Education
		33	Recreation
		34	Coach/Teaching
		35	Other P.E.
		37	Business Education
1.05	Engineering	14	Engineering
		15	Architecture
1.06	Fine Arts	43	Speech & Drama
		50	Music
		51	Humanities
		52	Art
		55	Other Humanities
1.07	Health	03	Pre-professional
		05	Nursing
1.08	Humanities	40	English
		44	Other Letters
		53	Foreign Languages
		54	Philosophy
1.10	Law	21	Law
1.11	Mathematics & Computer Science	12	Mathematics
		13	Computer
1.12	Public Service	04	Home Economics
		22	Library Science
		23	Public Service
		41	Communication (Radio-TV)
		42	Journalism

STATE PPBS		SEMINOLE CURRICULUM	
Number	Name	Number	Name
1.13	Social Science	20	Area Studies
		25	Psychology
		26	Anthropology
		27	Government
		28	Economics
		29	Geography
		30	History
		31	Sociology
		32	Other Social Science
1.14	General Degree (Transfer)	98	General Degree (To Transfer)
1.15	General Degree (Non-Transfer)	99	General Degree (No-Transfer)
1.91	Retraining	90	Retraining
1.92	Fulfillment	91	Fulfillment
1.22	Distributive	61	General-Distributive
		62	Hotel-Motel
		63	Retailing
		64	Wholesaling
		65	Financial Management (A.S.)
1.25	Office	66	Secretary General
		67	Executive Secretary
		68	Legal Secretary
1.27	Technical	70	D.P. (A.S.)
		71	D.P.(Certificate)
		73	Design Drafting (Certificate)
		74	Criminal Justice Tech. (A.S.)
		75	Criminal Justice Tech. (Certificate)
		76	Quality Eng. Tech. (A.S.)
		77	Quality Cont. Tech. (Certificate)
		78	Bldg. Const. Drafting (A.S.)
		79	Civil Drafting (A.S.)
		80	Illustrative Drafting (A.S.)
		81	Mech. Design Drafting (A.S.)
		82	Const. Eng. Tech (A.S.)
		83	Design Eng. Tech (A.S.)
		84	Electronic Eng. Tech. (A.S.)
		85	Electronic Tech (Certificate)

Appendix B

STUDENT FLOW MATRIX

Term I into Term II

TO

FROM	PRVS TERM	Agr	Bio Phy	Bus	Ed	Eng	Fine Arts	Heal	Hum	Law	Math Comp	Pub Serv	Soc Sc	Gen D Trans	Gen D N-Tra	Dist	Off	Tech	Re-Train	Fulfill
Agr	011	007	002	000	000	001	000	001	000	000	000	000	000	000	000	000	000	000	000	000
Bio & Phy Sc	077	000	058	001	000	002	000	007	000	000	000	000	001	006	000	000	000	001	000	001
Bus	283	000	000	236	003	001	000	002	001	001	000	000	001	025	000	007	004	001	000	001
Ed	124	000	000	008	092	000	002	001	003	000	000	000	002	011	001	002	000	001	000	001
Eng	044	002	000	000	000	033	001	002	002	000	000	000	001	001	000	000	000	002	000	000
Fine Arts	098	000	001	000	002	000	084	000	001	000	000	000	002	006	000	000	000	000	000	002
Health	0[illegible]	000	007	003	002	000	000	043	000	001	000	000	002	006	000	000	000	000	000	000
Hum	029	000	000	000	000	000	003	000	023	000	000	000	000	002	000	001	000	000	000	000
Law	047	000	000	000	000	000	000	001	000	028	000	000	004	006	000	000	000	008	000	000
Math & Comp Sc	023	000	000	001	001	000	000	000	000	000	018	000	000	001	000	000	001	001	000	000
Pub Serv	013	000	000	003	001	000	001	000	000	000	000	006	000	001	000	000	001	000	000	000
Soc Sc	114	000	000	002	006	000	003	000	001	000	000	000	083	017	001	001	000	000	000	000
Gen Degree (Transfer)	200	001	006	013	019	004	007	003	002	005	002	001	013	118	001	002	000	003	000	000
Gen Degree (N-Trans)	010	000	000	000	000	000	000	000	000	000	000	000	001	006	003	000	000	000	000	000
Dist	039	000	000	013	000	001	000	000	000	000	000	000	001	004	000	020	000	000	000	000
Office	067	000	000	005	000	000	000	000	000	000	003	000	000	002	001	000	055	000	000	001
Tech	112	000	000	000	000	002	000	000	000	000	001	000	002	004	000	000	000	103	000	000
Retrain	005	000	000	002	000	000	000	000	000	000	000	000	000	001	000	000	000	001	001	000
Fulfill	031	000	000	001	000	001	003	000	001	000	000	000	001	009	000	000	000	000	000	015
TOTAL	1391	010	074	0288	0126	045	104	060	034	035	024	007	0114	0226	007	033	061	0121	001	0021

Appendix C

STUDENT FLOW MATRIX

Term I into Term II

C.C. FROM	PRVS TERM	Agr	Bio & Phy Sc	Bus	Ed	Eng	Fine Arts	Health	Hum	Law	Math & Comp. Sc	Pub Serv	Soc Sc	Gen De Trans	Gen De N-Trans	Dist	Office	Tech	ReTr ain	Fulfil
Agr	100	064	018	000	000	009	000	009	000	000	000	000	000	000	000	000	000	000	000	000
Bio & Phy Sc.	100	000	075	001	000	003	000	009	000	000	000	000	001	008	000	000	000	001	000	001
Bus	100	000	000	083	001	000	000	001	000	000	000	000	000	009	000	002	001	000	000	000
Ed	100	000	000	006	074	000	002	001	002	000	000	000	002	009	001	002	000	001	000	001
Eng	100	005	000	000	000	075	002	005	005	000	000	000	002	002	000	000	000	005	000	000
Fine Arts	100	000	001	000	002	000	086	000	001	000	000	000	002	006	000	000	000	000	000	002
Health	100	000	011	005	003	000	000	067	000	002	000	000	003	009	000	000	000	000	000	000
Hum	100	000	000	000	000	000	010	000	079	000	000	000	000	007	000	003	000	000	000	000
Law	100	000	000	000	000	000	000	002	000	060	000	000	009	013	000	000	000	017	000	000
Math & Comp Sc	100	000	000	004	004	000	000	000	000	000	078	000	000	004	000	000	004	004	000	000
Pub Serv	100	000	000	023	008	000	008	000	000	000	000	046	000	008	000	000	008	000	000	000
Soc Sc	100	000	000	002	005	000	003	000	001	000	000	000	073	015	001	001	000	000	000	000
Gen Degr (Trans)	100	001	003	007	010	002	004	002	001	003	001	001	007	059	001	001	000	002	000	000
Gen Degr (N-Trans)	100	000	000	000	000	000	000	000	000	000	000	000	000	010	060	030	000	000	000	000
Dist	100	000	000	033	000	003	000	000	000	000	000	000	003	010	000	051	000	000	000	000
Office	100	000	000	007	000	000	000	000	000	000	004	000	000	003	005	000	082	000	000	005
Tech	100	000	000	000	000	002	000	000	000	000	001	000	002	004	000	000	000	092	000	000
Retrain	100	000	000	040	000	000	000	000	000	000	000	000	000	020	000	000	000	020	020	000
Fulfill	100	000	000	003	000	003	010	000	003	000	000	000	003	029	000	000	000	000	000	048